



Tu-160 strategic bombers of the Russian Aerospace Forces, named "Ivan Yarygin" (serial number 704) and "Vasily Reshetnikov" (serial number 702), upgraded at the Kazan Aviation Plant named after S.P. Gorbunov (a branch of PJSC Tupolev). Kazan, 23.04.2020 (photo - UAC)

Author: [DIMMI](#)

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Tu-160 - BLACKJACK

DATA FOR 2025 (standard update)

Tu-160 (product 70) - BLACKJACK / RAM-P

Tu-160S (product 70-03) - BLACKJACK

Tu-160M (product 70M) - BLACKJACK

Tu-160M2 (product 70M2) - BLACKJACK-M

★★★★

A heavy multi-mode strategic bomber with variable-sweep wings. Designed by the OKB MMZ "Opyt" of A.N. Tupolev, chief designer from 1975 to 2010 Valentin Ivanovich Bliznyuk. The aircraft is generally similar to the project of the multi-mode bomber M-18 of the OKB V.M. Myasishchev. The original version of the Tu-160 had an ogive wing and was designed on the basis of the Tu-144 (1969-1972). Preliminary R&D on the Tu-160 with a variable-geometry wing began in 1972. Design of the final version - product 70, Tu-160M project, aircraft "K" began in 1975 in accordance with the decree of the USSR Council of Ministers of June 26, 1974 and the decree of the USSR Council of Ministers N 1040-348 of December 19, 1975. The preliminary design and creation of a full-size model of the Tu-160 - 1976-1977.

The Tu-160 mockup was approved at the end of 1977. Production of the first three prototypes (flight test aircraft 70-01, static test aircraft 70-02, pre-production aircraft 70-03) began in 1977 at MMZ Opyt (fuselage production by Kazan Aircraft Plant, wing and stabilizer by Novosibirsk Aircraft Plant named after V. Chkalov, cargo compartment doors by Voronezh Aircraft Plant, chassis by Gorky Aircraft Plant). At the same time, preparations for serial production began at Kazan Aircraft Plant No. 22 (initially, it was planned to expand production to the Ulyanovsk Aircraft Plant). In May 1980, prototype 70-01 was built and transported to the Flight Research Institute airfield in Zhukovsky. Final assembly of the aircraft was completed in January 1981 and ground testing of the aircraft began. Aircraft 70-01 was rolled out onto the airfield on August 18, 1981. Systems and equipment checks began on October 22, 1981, and on November 14, 1981, under the control of B.I. Veremey's crew, the aircraft made its first run. The first photo in the West was taken from a civilian aircraft taking off from Bykovo Airport on November 25, 1981 - the aircraft was named RAM-P ("Ramenskoye", unidentified model of equipment No. 16).

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Tu-160 - BLACKJACK, refueling boom released, 21.03.2008 (photo by Sergey Brovko, <http://picasaweb.google.com/brovko.sergey>).

Author: [DIMMI](#)

Created: 04.09.2009 00:29:27

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Tu-4 BULL

ADDITION REQUIRED (data for 1997)

Tu-4 - BULL

★★★

Heavy bomber - the last Soviet serial heavy bomber with piston engines - a copy of the American B-29. The development of the long-range bomber in the A.N. Tupolev Design Bureau according to the DVB-202 project was carried out in 1945-1947. But in the end, on the personal instructions of I.V. Stalin, the design bureau developed an exact copy of the American B-29 bomber. The B-4 prototype made its first flight on June 19, 1947 (pilot - N.S. Rybko). Serial production began in July 1947. State tests were completed in 1948. It has been supplied to long-range aviation units since 1949 (the 185th Long-Range Bomber Aviation Regiment in Poltava and the 890th Long-Range Bomber Aviation Regiment in Kazan). The aircraft was produced at Plant No. 22 in Kazan, No. 18 in Kuibyshev and No. 23 in Fili near Moscow until 1951. A total of about 1,000 Tu-4s were produced.



Tu-4 factory No. 2805103 at the Russian Air Force Museum in Monino, 20.09.2008 (photo - V'italy Kuzmin, <http://vitalykuzmin.net>). [KS-1](#)

cruise missiles under Tu-4K (<http://crimso.msk.ru>).Author: [DIMMI](#)

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PAK DA / product 80 (project)

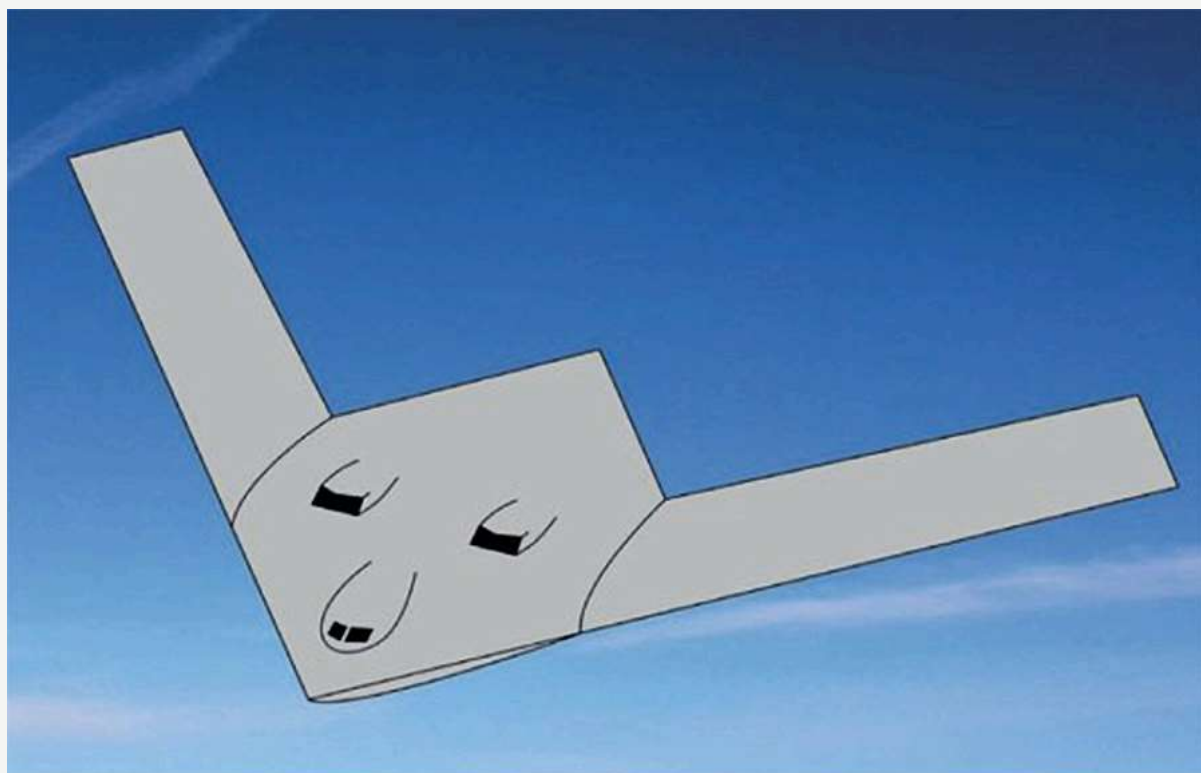
DATA FOR 2023 (standard update)

PAK DA / product 80 (project)

★★★★

The Prospective Long-Range Aviation Complex is a project for a strategic bomber and missile carrier. The PAK DA program (code name) aims to create a long-range bomber to replace the [Tu-160](#) , [Tu-95MS](#) (as of the summer of 2009 and earlier) and [Tu-22M3](#) (according to statements made in December 2009) aircraft in service with the Russian Air Force. Preliminary studies of the PAK DA design in design bureaus and the formation of requirements for the aircraft by the Air Force began in 1999. Preparations for the participation of various design bureaus in the competition to create a fifth-generation bomber began in April 2007. In December 2007, it was announced that the Russian Air Force had formulated the tactical and technical requirements for the PAK DA program (interview of the Commander-in-Chief of the Russian Air Force Alexander Zelin with the Interfax agency, December 2007).

Probably, the competition for the development of the PAK DA was attended by the Tupolev Design Bureau, the Sukhoi Design Bureau, the Ilyushin Design Bureau and the Myasishchev Design Bureau. According to media reports, the Tupolev Design Bureau's PAK DA project is being created based on the [Tu-160](#) design . The Sukhoi Design Bureau is most likely either modifying the " [Object 54S](#) " PAK DA to meet the competition requirements or developing a project using the developments on the T-4MS theme (1970s). According to the statement by the General Director of OAO Tupolev I. Shevchuk, the contract for the PAK DA program was won by the Sukhoi Design Bureau at the MAKS-2009 exhibition. A.N. Tupolev and in 2009 the Russian Ministry of Defense signed a contract with OAO Tupolev to conduct R&D on a bomber based on [the Tu-160](#) design (while state financing of R&D began in 2008). On 23.12.2009, the president of the Tupolev company, Alexander Bobryshev, announced that R&D on the PAK DA would be completed in 2012 and the design bureau would begin the actual R&D, which would be completed in 2017. In 2011, VNIIRA developed a preliminary design for the avionics integration complex for the PAK DA. The Russian Air Force DA Command issued the design specifications for the bomber on 20.12.2011. By February 2012, R&D on the PAK DA was completed and the aircraft's preliminary design was being developed. The chief designer and first deputy director of the program of the prospective aviation complex of long-range aviation (PAK DA) as of 2013 is Mikhail Yuryevich Aseyev ([source](#)). The factory name of the aircraft - "product 80" - is repeatedly mentioned in the open press. *The data are presumptive and largely reflect the subjective view of the author on the aircraft project.*



Speculative view of the PAK DA strategic bomber. (Piotr Butowski)

Possible image of the future PAK DA according to Piotr Butowski, 2022 (https://twitter.com/piotr_butowski)Author: [DIMMI](#)

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M-4 BISON

UPDATE, ILLUSTRATIONS (data for 1997)**M-4 "Hammer" BISON-A, B, C**

Strategic bomber developed in OKB-23 under the supervision of V.M. Myasishchev under the project "25" (M-25). R & D since March 24, 1951. The M-4 prototype made its first flight on January 20, 1953 (pilots - F.F. Opadchiy, A.N. Gratsiansky, navigator - A.I. Pomazunov, radio operator - I.I. Rykhlov, flight engineer - G.A. Nefedov, leading engineers - I.N. Kvitko and A.I. Nikonov). By the Decree of the Government of the USSR dated September 19, 1953, Plant No. 23 was ordered to build an experimental series - 3 units in 1954 and 8 units in 1955. Testing of the second aircraft began on December 23, 1953. Factory tests ended on April 15, 1954, and on the same day the aircraft was accepted for state tests, but they actually began on May 4, 1954. On May 1, 1954, the experimental M-4 was shown at a parade over Red Square in Moscow. Serial production of the M-4 began in 1954 at the OKB-23 plant in Fili (plant No. 23 near Moscow). In 1955, the aircraft underwent military tests at the air base in Engels. Since 1975, the aircraft has been decommissioned as a bomber.

Author: [DMMI](#)

Created: 19.08.2009 23:50:36

Comments: [20](#)[READ THE FULL ARTICLE >](#)**Aircraft 485 (project)****DATA FOR 2015 (standard update)****Aircraft 485 (project)**

★★★

Long-range and ultra-long-range bomber. The aircraft design was developed using the experience of developing the Tu-4 aircraft at OKB-156 (now OAO Tupolev). The index "485" means that this was the fifth aircraft design, the development of which began in 1948. The development plan for the USSR Air Force for 1947 formulated requirements for a long-range bomber - a replacement for the Tu-4 bomber. It envisaged the creation of two types of bombers - with piston engines and with turbojet engines. Both aircraft versions were to be made with sealed cabins, powerful defensive weapons and modern navigation and communication equipment. As a result, in 1947-1948. In the OKB-156 project team (headed by B.M. Kondorsky), several preliminary designs for long-range bombers were developed - aircraft 471, 473, 473, 485, 487 (future Tu-85) and 489.

The design for aircraft 485 was developed in the summer of 1948 in two versions - with 4 engines (long-range version) and with 6 engines (ultra-long-range). Work on the project was stopped in 1949. By default, the data for the six-engine version of aircraft 485 is given.



Model of aircraft 485. Model shop of JSC Tupolev, August 2013 (<http://onepamop.livejournal.com>).

Author: [DMMI](#)

Created: 12.11.2013 14:39:02

Comments: [8](#)[READ THE FULL ARTICLE >](#)**M-60B (project)****DATA FOR 2015 (standard update)****M-60B (project)**

★★★

Strategic bomber project. The development of the concept of a multi-purpose high-altitude subsonic aircraft (MVDS) was initiated by the V.M. Myasishchev EMZ Design Bureau in 1979. Chief Designer - M.A. Guryanov (from 1994 to 1997, before that the head of the research topic), deputy - B.M. Morkovkin. On February 26, 1986, the Minister of Aviation Industry I.S. Silaev issued an order to conduct R & D on the MVDS. In May 1985, the EMZ began the topic of "Theoretical, design and experimental research on the creation of a wide-body aircraft" (code "60"). In early 1986, a technical proposal for the creation of a dual-purpose MVDS was prepared and submitted to the USSR MAP. On May 11, 1986, the USSR MAP issued order No. 1114 on conducting R & D on topic "60". In late 1989, an agreement was concluded between EMZ and the USSR Ministry of Aviation Industry for the development of a preliminary design for a dual-purpose MVDS. On May 15, 1991, the preliminary design materials for the civil version of the aircraft were reviewed by the USSR Ministry of Aviation Industry, which decided to prepare the technical specifications for the development of the aircraft. In July 1991, the preliminary design materials were presented to the military Customer's commission, which approved the materials and recommended developing a preliminary design for the aircraft. In October 1991, an agreement was signed for the development of the preliminary design for the M-60.

As of November 1998, EMZ im. V. M. Myasishchev is taking part in the Russian Air Force competition for the development of a strategic aviation aircraft with the M-60B aircraft design ([source](#)). It was planned that the winner would be announced in 1999, but in the end, only the requirements for the Prospective Long-Range Aviation Complex (PAK DA) were formulated. In addition to the M-60B, projects from the Tupolev and Sukhoi Design Bureaus also participated in the competition.

The development of the bomber project was discontinued in 2001.



Model of the M-60B aircraft in the Gromov Flight Research Institute museum, February 2012 (photo - Evgeny Erokhin, <http://missiles2go.ru/>).

Author: [DIMMI](#)

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Tu-95 - BEAR

ARTICLE IS NOT COMPLETE (data for 1997, additions 2010)

Tu-95 BEAR-A, B, C, D, E, F, G, H, J

Long-range bomber, carrier of cruise missiles. Chief designer of the Tu-95 project is N. Bazenkov (since 1976 - N. Kirsanov). R & D began in 1949. The USSR Council of Ministers decree on the creation of the Tu-95 was adopted on July 11, 1951. Release of working drawings of the first prototype Tu-95/1 and the beginning of creation - September 1951. The first flight of the Tu-95/1 prototype - November 11, 1952 (pilots A. Perelet and A. Chernov), a catastrophe occurred on the seventeenth flight (May 11, 1953). In July 1954, the second prototype Tu-95/2 with TV-12 (NK-12) engines was built. The first flight of the Tu-95/2 - February 16, 1955 (pilots M. Nyukhtikov and I. Sukhomlin). Factory tests were completed in January 1956. The first two production aircraft took off in October 1955 (Aircraft Plant No. 18 in Kuibyshev). Since 1957, Tu-95M has been in production (production of both modifications ended in 1959) with NK-12 and NK-12M engines, respectively (Tu-95 and Tu-95M). Adopted into service in August 1957.



Tu-95MS Bear-H (publication - 2012, photo - V.Savitsky, <http://www.mil.ru>).



Tu-95MS BEAR-H and B-52H (<http://militaryphotos.net>)

Author: [DIMMI](#)

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M-50 - BOUNDER

ADDITION REQUIRED (data for 1997)

M-50 - BOUNDER

M-52

Experimental heavy supersonic bomber designed by V.M. Myasishchev Design Bureau. R&D - from 1954-56. First flight of the M-50 prototype - October 27, 1959 (pilots N.I. Goryainov and A.S. Lipko). The second prototype M-52 was built in 1959-1960, but did not fly (it was dismantled for scrap metal in the late 1970s).





Bomber M-50 BOUNDER at the Air Force Museum in Monino, 05/09/1996 (photo - Valery Savelyev, <http://russianplanes.net/>).

Author: [DIMMI](#)

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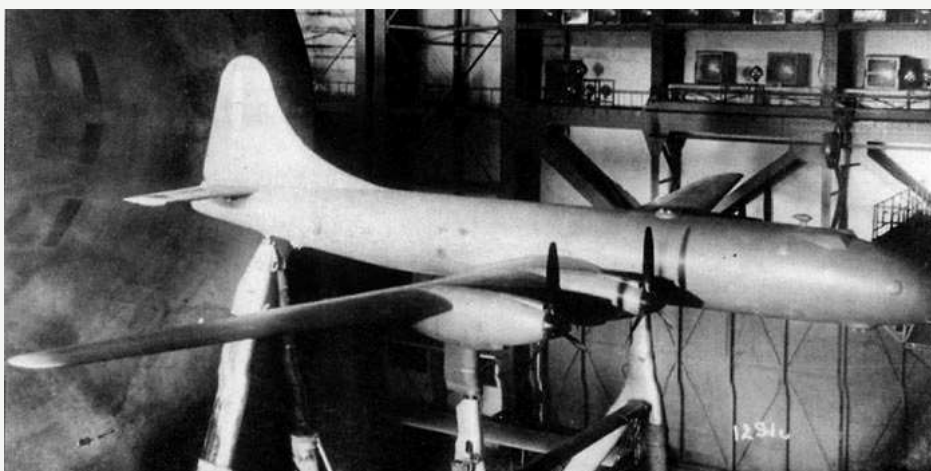
Tu-64

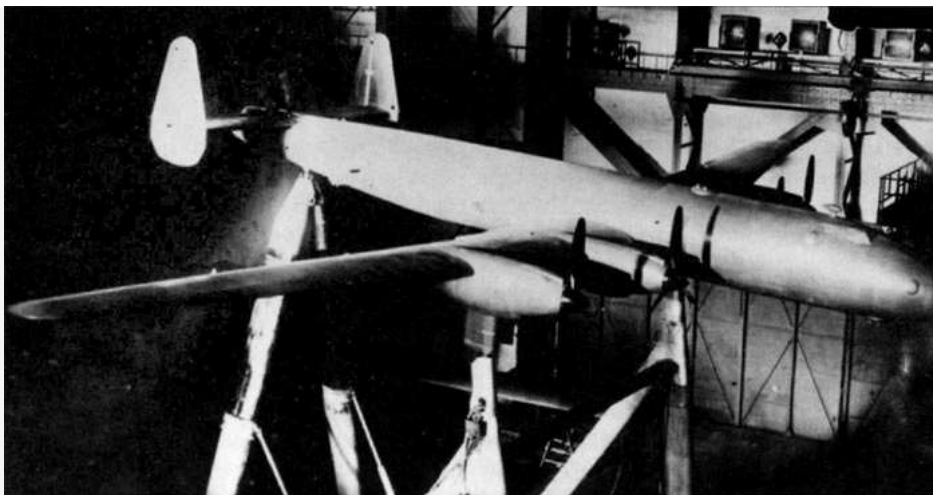
DATA FOR 2011 (standard update)

Aircraft 64, Tu-64 / Tu-10



Long-range bomber project. Development of a high-altitude long-range bomber with a pressurized cabin was started by OKB-156 of A.N. Tupolev in September 1943 (*Buttler, Gordon*). Chief Designer D.G. Markov. Aerodynamic configuration options for the aircraft were being selected, and models were being tested at TsAGI. Design work began in May 1944. In August 1944, Air Force requirements were adjusted to reduce the aircraft's altitude requirements. A full-scale mock-up of the aircraft was completed in September 1944. In February 1945, Air Force requirements were adjusted again - an operator of the aircraft's on-board radar was added to the crew. The mock-up was approved on April 27, 1945. The Air Force designation "Tu-10" was reserved for the aircraft. In mid-1945, the pilot production began preparing for the production of bomber prototypes, began manufacturing tooling for the aircraft, and began producing technical design drawings. Development was stopped due to the creation of a copy of the B-29 Superfortress - the Tu-4 bomber . The official order of the USSR Ministry of Aviation Industry to stop development was issued on April 16, 1947 - simultaneously with the completion of the first Tu-4. All of the specified performance characteristics of the Tu-64 are design characteristics.





Models of the "64" bomber layout for wind tunnel testing (Buttler Tony, Gordon Yefim. Soviet Secret Projects - Bombers since 1945. Midland Publishing, 2004, England).

Author: [DIMMI](#)

Created: 16.01.2009 00:18:26

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T-4

DATA FOR 2009 (ILLUSTRATIONS, standard addition)

T-4 (product "100")



Aircraft 101 type T-4 during tests at the Flight Research Institute in Zhukovsky (1972)

Long-range supersonic bomber designed by P.O. Sukhoi Design Bureau (chief designer - N.S. Chernyakov). The development assignment (competition with A.N. Tupolev and A.S. Yakovlev Design Bureaus) was given in the fall of 1961. R & D work began in the spring of 1962 (USSR Government Resolution No. 1194-440 of 03.12.1963). In 1962, Lavochkin Design Bureau joined the design of the aircraft, and the side sections of the fuselage were manufactured at the Lavochkin Design Bureau's experimental production facility. December 1962 - Lavochkin Design Bureau plant was transferred to V.N. Chelomey, and Burevestnik Design Bureau and Tushino Machine-Building Plant joined the work on the T-4. More than 20 aircraft configurations were studied during the design process. In 1967-1969. On the flying laboratory "100L-1" based on the Su-9, 8 wing configurations were tested. The final configuration was determined by December 1965 (33rd version).

Author: [DIMMI](#)

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Tu-85 BARGE

ADDITION REQUIRED (data for 1997)

Tu-85 BARGE

Heavy bomber, the last military aircraft with piston engines. First flight of the prototype - January 9, 1951, tests and a small series for tests - until 1952.

Author: [DIMMI](#)

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Tu-82 BUTCHER

ADDITION REQUIRED (data for 1997)

Tu-82 BUTCHER

Experimental bomber. Decree on the creation of the aircraft - July 1948. The first flight of object "82" was on March 24, 1949 (pilot A.D. Perelet). Further development of the model - aircraft "83" - was not implemented. It was supposed to give the series the designation Tu-22.

Author: [DIMMI](#)

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Tu-80

ADDITION REQUIRED (data for 1997)

Tu-80

Long-range bomber, development of the Tu-4 design. First flight - December 1, 1949.

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